

**Manner of Making Amendments**

Applicant has recently learned that the present spacing that was used in the amendments is single spacing not double and apologizes for complying incorrectly and not understanding typing definitions. The amendments have been sent with the double spacing.

**Specification**

Applicant has capitalized RUBBERMAID followed by refuse container and has amended the definition to define that when this word RUBBERMAID refuse container is used that it refers to the specific 32 gallon wheeled refuse container that is tilted for rolling and shown in the drawings. The applicant appreciates the suggestion of a plastic trash receptacle but prefers the specific reference for clarity and to obviate the recycle container on the refuse container. It is understood that the generic terminology is "refuse container" since RUBBERMAID does not give a specific name to the container.

**Cross reference**

The first page 1 of 13 has been corrected to include the cross reference to the provisional patent.

**Drawing Objections**

The original disclosure under Objects and Advantages page 4 of 13, "(k) the wheeled containers will nest in each other and the recycle containers will nest in each other and the wheeled containers will also nest in the recycle containers and **the lower size of recycle containers can partially nest in the upper size of recycle container**, thus being able to form a single pile of any number of sizes of recycle containers with the wheeled containers reducing shipping costs and distributor shelf space even for small quantities." The original disclosure states "**the lower size of recycle containers can partially nest in the upper size of recycle container**" clearly confirms that there are two sizes of recycle container in the one instant, described as lower and upper. This proves that the applicant had knowledge and possession and disclosure in the original application supporting the amended fig. 1 showing two recycle containers, a lower and an upper. It is also not possible to construe the recycle container on top of the refuse container as the upper recycle container as it is round not square and definitely too small to allow the lower recycle bin to partially nest in it.

The applicant has included an additional Fig 12 that complies with 35 USC 112. The figure shows a wheeled container with an attachable container and a plurality of attachable containers on top of first attachable container. This is clearly supported by the original specification disclosed by the original claims 1 and 2

1. A modular wheeled container system that is tilted from the free standing position for rolling comprising:

- a) a wheeled container having a means for rolling
- b) at least one attachable container, and
- c) a means for securing adjoining said wheeled container to said attachable container.

2. The system of claim 1 further including a plurality of attachable containers stacked and secured on top of said attachable container.

The claim 3 issue of hitching is not shown in this Fig 12 and the details of the hitching should not have any bearing on the allowance. This figure would then make it clear for someone skilled in the art to make and use the invention and clarify that the inventor had possession of the claimed invention. The skilled person would see the original Fig 1 with one attachable container and the Fig 12 of a wheeled container with 3 attachable containers. Some one skilled in the art would know that by removing one of the three attachable containers, that the inventor must have possessed the claimed invention of two attachable containers. Some one skilled in the art broadly interpreting the phrase "at least one" to mean one or only one, would then conclude that "at least one" also included 2 attachable containers and that the inventor at the time did not later discover that when an attachable container is removed, that the claimed invention or a rigid entity for comfortable tilting and rolling was still present.

The objection under 37 CFR 1.121(f) "specific arrangement" of the containers is not the invention but obvious duplication and obvious variation of the invention of tilted hitching containers and forming a rigid entity from a wheeled container and at least one attachable container. The new results are ergonomically comfortable tilting and rolling and increased vertical stability by overcoming the lifting weight / volume restriction taught by a one piece 32 gallon container for the heavier than refuse weight to recyclable goods weight. The invention is shown by the original Fig 1 where the wheeled container is made into a rigid entity and the overall container height increased by the securing of at least one attachable container and the tilted hitching and new use for the Ferbrache handles are shown. The original drawings and specification clearly shows every aspect of the invention producing all of the new and unexpected results. Arranging the containers to be rolled so that say the refuse container is behind the recycle rigid entity does not produce any new result or claimed benefit. Hitching at different points does not produce any new result or claimed benefit as it is tilted hitching that is claimed. Having two or three attachable containers does not produce any new result or claimed benefit over the single attachable container. When there is no new result or unclaimed benefit there cannot be new matter. Having ten attachable containers gives the benefit of more diversity and volume, but that is not was is claimed or patentable, and hence adds no new result or claimed new benefit, and hence no new matter. This complies with 37 CFR 1.121(f). The applicant requests a reference from the Patent Law that defines the term "new matter". If no such reference exists, then a description of the new and unexpected result that is not claimed. The examiner describes the amendment to fig 1 with the words "additional details" as new matter. Applicant asks for a reference or explanation between duplication / variation and additional details / new matter, and how and why the new matter is not claimed by the claim 1 language "at least one attachable container" and how the language does not include two, or a plurality of attachable containers. A reference that would support the broadening of the language to limit the phrase "at least one" to "only one" or "one" in if the application to limit an interpretation of specification as proper. Even if it were proper to limit the "at least one" to "one" the applicant would have support from the original

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claim 2 language to have a wheeled container with 3 attachable containers since a plurality of attachable containers on top of said wheeled container is claimed. Would the examiner allow such an amendment? If not then by what reference or grounds would it not be allowed? Would it not follow that a "plurality" can then be broadly interpreted as 4 attachable containers, and so such an amendment would not be supported if broad interpretation is proper for limiting specifications? Applicant believes that a wheeled container with 3 attachable containers is directly described by the original specification regardless of "at least one" being interpreted as "one". This being the case, it would not be reasonable that of three attachable containers as well as one attachable container on top of a wheeled container (original fig 1), but not two attachable containers, is part of the invention. Would the subject matter of two attachable containers not reasonably convey to someone skilled in the relevant art when the inventor had possession of the subject matter of one attachable and three attachable containers on top of a wheeled container? The applicant confesses that he does not understand the area of new matter and respectfully puts forth this reasoning and request for response for references and answers to these questions. It is understandable that an inventor cannot keep improving his invention during the patent process without a new date for the improvement being recorded as well as for the practical reasons of examination in terms of additional burden, new issues and new searches. The addition of two or three attachable containers adds no new issues or burdens, and was actually discussed extensively in the Evans art, as well as argued by the examiner that Evans 3 container pile was similar to the applicant's 3 container configuration. Applicant is convinced that there is no new matter or patent rule or that the general intent or spirit of the patent law is broken by the amended Fig 1 and that the allowance of the Fig 12 showing a plurality of attached containers on top of the original fig 1 as originally claimed will obviate that there is no new matter. If this is not the case, the applicant respectfully requests a response. **Applicant has amended the drawings with fig 12 addition showing 3 attachable containers on a wheeled container.**

The objection under 37 CFR 1.83(a), which states that the drawing must show "every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation" As explained above, the invention is the hitching of containers and forming a rigid entity from a wheeled container and at least one attachable container. The new results are ergonomically comfortable tilting and rolling and increased vertical stability by overcoming the lifting weight / volume restriction taught by a one piece 32 gallon container for the heavier than refuse weight to recyclable goods weight. The invention is shown by the original Fig 1 where the wheeled container is made into a rigid entity and the overall container height increased by the securing of at least one attachable container and the tilted hitching and new use for the Ferbrache handles are shown. The original drawings and specification clearly show every "feature" of the invention producing all of the new and unexpected results. The duplication of a second attachable container does not produce any new result or claimed benefit. Hitching at different points does not produce any new result or claimed benefit as it is tilted hitching that is claimed. Having two or three attachable containers does not produce any new result

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or claimed benefit over the single attachable container. When there is no new result or unclaimed benefit there cannot be a new feature. Having ten attachable containers gives the benefit of more diversity and volume, but that is not what is claimed or patentable, and hence adds no new result or claimed benefit, and hence no new feature. This complies with 37 CFR 1.83(a). The applicant requests a reference from the Patent Law that defines the term "feature". If no such reference exists, then a description of the new and unexpected result that is not claimed. Applicant asks for a reference or explanation between duplication / variation and feature. The "however" clause clearly indicates that conventional, not essential features for proper understanding can be added as a label or symbol. The applicant has originally disclosed sufficient detail that someone skilled in the art of container stacking and design would understand that containers stacked can vary in height and quantity, and that the ultimate stack height is determined by stability, weight, accessibility, container strength, etc. These details are not essential to the understanding of the invention and are obvious duplication and variations for someone skilled in the art. The features of the invention are the rigid entity formation and tilted hitching and new use of the Ferbrache handles. The applicant requests a description of the novel feature not shown by the original disclosure and the resulting advantages of the novel feature.

applicant  
acknowledges  
obviousness

The applicant request the specific limitations of claims 3-7,9,10,22 and 23 that are not shown in the drawings.

### Claim Objections

Applicant has proposed a drawing amendment showing 3 attachable containers on top of a wheeled container. The original claims read:

1. A modular wheeled container system that is tilted from the free standing position for rolling comprising:
  - a) a wheeled container having a means for rolling
  - b) at least one attachable container, and
  - c) a means for securing adjoining said wheeled container to said attachable container.
2. The system of claim 1 further including a plurality of attachable containers stacked and secured on top of said attachable container.

Applicant fig 12 shows the original fig. 1 with, having one attachable container on top of the wheeled container but now having a plurality of attachable containers stacked and secured on top of said attachable container. How would it be possible for someone skilled in the art, that when one of the attachable containers when removed, leaving two attachable containers secured on top of the wheeled container, was not part of the invention and not realized by the inventor?

### 112 Rejections

For claims 1,3-7,9,10, and 17 and 21, and claims regarding the second attachable container it is unclear what information or feature of the invention would someone skilled

in the art not be conveyed as not being possessed by the inventor? Applicant gives the above explanation as with regards to the second attachable container. In addition, the securing of an attachable container to the RUBBERMAID refuse container is shown in the original Fig 1 and described in the operation as being similar to the lid, which is well known to many people using the refuse container. The securing of the attachable container would not challenge someone skilled in the art to make and use such an attachable container since it entails molding of walls onto the existing lid edge as shown in Fig 3, or simply adding walls to the existing lid. The dimensions are not critical for the walls, and the dimensions and details that do require any significant understanding are already existing, such as the lid edge to RUBBERMAID refuse container opening. Other shapes are shown in Fig 2-8 and dimensions and tolerances are flexible and basic engineering knowledge especially for someone skilled in containers or plastics.

The original disclosure under Objects and Advantages page 4 of 13, "(k) the wheeled containers will nest in each other and the recycle containers will nest in each other and the wheeled containers will also nest in the recycle containers and **the lower size of recycle containers can partially nest in the upper size of recycle container**, thus being able to form a single pile of any number of sizes of recycle containers with the wheeled containers reducing shipping costs and distributor shelf space even for small quantities." The original disclosure states "**the lower size of recycle containers can partially nest in the upper size of recycle container**" clearly states that there are two sizes of recycle container in the one application, described as lower and upper. This proves that the applicant had knowledge and possession and disclosure in the original application supporting the amended fig. 1 showing two recycle containers, a lower and an upper. It is also not possible to construe the recycle container on top of the refuse container as the upper recycle container as it is a round not square and definitely too small to allow the lower recycle bin to partially nest in it.

For claims 1,3-7,9,10,22 and new claims, applicant has proposed a drawing amendment showing 3 attachable containers on top of a wheeled container. Applicant gives the above explanation as with regards to the second attachable container.

For claim 1, the option is not an option if the height of the rigid entity formed by a wheeled container and a first attachable container is not high enough for ergonomically comfortable tilting and rolling. This being the case, the limitation and object of the invention are not met. The condition "to be added if the combined height of the said wheeled container and said first attachable container do not reach the height for ergonomically comfortable tilting and rolling," determines when the second attachable container is part of the claim. This would make the claim definite since the scope of the claim is to form a rigid entity of sufficient height for ergonomically comfortable tilting and rolling. If the height of a single attachable container is sufficient for ergonomically comfortable tilting and rolling, the invention object and limitation are met and exceeded or irrelevant if a second attachable container is added, but not undefined.

In the original specification a RUBBERMAID 32 gallon refuse container is shown. It is well known that the base perimeter of this container is approximately 50 inches. The applicant's drawing clearly shows the wheeled container significantly larger than the RUBBERMAID refuse container as well as square in shape. Scaling the drawing shows

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that the base perimeter of the wheeled container relative to the RUBBERMAID 32 gallon refuse container to be 64 inches. The object and advantages clearly outline the new and unexpected result of increased volume without the effective lifting weight being increased as the containers are dumped independently. The limitation "the base perimeter" will have the amendment read "a base perimeter"

The applicant has removed of the "and whereby" from the "wherein and whereby" from lines 25 and 44-45 of claim 1.

For claim 7 applicant amends the claim to remove the Ferbrache patent reference and include the limitations and / or description as described from the text of the Ferbrache patent and then listing the new uses or improvements.

Other amendments are indicated in the claims according to the revised format for claims.

Applicant is presently pursuing the amendment and subsequent rejection of Fig 1 which shows the invention of the rigid entity with two attachable containers instead of the original simplest or minimal configuration of the invention of the rigid entity with one attachable container. Both show the invention of the rigid entity, the amended version is to add clarity and is shown (reduced to practice) in the provisional patent visually. Applicant still waits for the response from the supervisor and from the examiner to the explanation with regards to the art reduced to practice by the provisional patent.

Regardless of the rejection or possible allowance of the amended figure, the feature of the invention of the rigid entity is disclosed and the claims including reference to more than one attachable container should be treated as reduced to practice or duplication of the invention or as originally claimed by the limitation "at least one attachable container" as it would be impossible to show every different configuration of attachable container and hitched container. The examiner has requested a proposed drawing correction or corrected drawings. Applicant believes all features of the invention are shown in both figures but is finding it difficult to claim or show the rigid entity novelty.

Under 35 U.S.C. 112 Specification, the second paragraph states "the specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. Applicant's specification concludes with claim 1 "at least one attachable container", claim 2 "a plurality of attachable containers stacked and secured on top of said attachable container", and claim 11 "at least one attachable container, and a means for securing adjoining said wheeled container to said attachable container whereby the combined containers form a single rigid entity". These claims are the conclusion of the specification and with the attached drawing of the provisional patent and the original Fig 1 disclose the invention to enable someone skilled in the art to make and use the same. Under 35 U.S.C. 113 are "The applicant shall furnish a drawing where necessary for the understanding of the subject matter" and in this case not even the original Fig. 1 or the provisional patent drawing or the amended Fig 1

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drawings are necessary and the amended Fig 1 drawing in any way adds new matter that was not part of the original disclosure.

In response to the PAPER NO. 17 Office Action mailed 11/05/2002, concerning claim 2 and the combining into claim 1 new matter. Applicant has sent with the RCE a drawing of wheeled container with two attachable containers, one attachable container secured to the top of the first attachable container. This drawing is page 6 of 14 of the provisional patent filed on 06/08/2000 application no. 60/209,964 as pursuant to 35 U.S.C. 119(e)(i) priority claimed in the Patent Application Transmittal Letter, and is identical in concept and structure to the amended fig. 1, showing one wheeled container and two attachable containers. The applicant proposes the amendment to the references of the front page. This drawing of the provisional patent should positively confirm that the art is not new matter to this application and that a wheeled container with two attachable containers stacked on top of the wheeled container is the art reduced to practice as of 06/08/2000. The original fig. 1 illustrated the forming of the rigid entity (also mentioned in claim 11) for rolling in the tilted position showing the simplest configuration of the invention. The forming of the rigid the claim language in claim 1 and is considered the object of the invention. Claim 11 states "at least one attachable container, and a means for securing adjoining said wheeled container to said attachable container whereby the combined containers form a single rigid entity". Claim 2 adds duplication of the said attachable container and means for securing, and should be considered duplication of existing matter and procedure of claim 1, but not new matter. Claim 2 is primarily relied upon to narrow the attached location of the attachable containers to being on top of the first said attachable container, as well as their structural configuration relative to each other as being stacked (or piled).

Even if claim 2 were considered canceled, the phrase "at least one" in reference to the attachable container of claim 1, clearly claims one as well as two attachable containers, as the amended fig 1 illustrates, or three or a plurality of attachable containers. Claim 1 then can by itself support the claim language of claim 2 when claim 1 includes more than one attachable container to be attached. Applicant relies on claim 1 language to support the Fig 1 amendment and two attachable containers.

1. A modular wheeled container system that is tilted from the free standing position for rolling comprising:
  - a) a wheeled container having a means for rolling
  - b) at least one attachable container, and
  - c) a means for securing adjoining said wheeled container to said attachable container.
2. The system of claim 1 further including a plurality of attachable containers stacked and secured on top of said attachable container.

Applicant respectfully requests clarification on following if the amendment of Fig 1 is still not allowed:

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a) why the original claim language does not reduce the art to practice for more than one attachable container? The feature of the invention of the rigid entity is disclosed and the claims including reference to more than one attachable container should be treated as reduced to practice as well as duplication of the invention or as originally claimed by the limitation "at least one attachable container" as it would be impossible to show every different configuration of attachable container and hitched container. Why would four attachable containers not be objected to under 37 CFR 183(a) if not shown, or five, or ten attachable containers? How can every possible configuration of recycle bin and refuse container be shown? Why is the invention of the rigid entity not shown and complete in the original Fig. 1?

b) how and why the provisional patent figure sent with the RCE is not considered relevant as the art reduced to practice

c) A reference that would support the broadening of the language to limit the phrase "at least one" to "only one" or "one" in if the application to limit an interpretation of specification as proper. Even if it were proper to limit the "at least one" to "one" the applicant would have support from the original claim 2 language to have a wheeled container with 3 attachable containers since a plurality of attachable containers on top of said wheeled container is claimed. Would the examiner allow such an amendment? If not then by what reference or grounds would it not be allowed? Would it not follow that a "plurality" can then be broadly interpreted as 4 attachable containers, and so such an amendment would not be supported if broad interpretation is proper for limiting specifications? Applicant believes that a wheeled container with 3 attachable containers is directly described by the original specification regardless of "at least one" being interpreted as "one". This being the case, it would not be reasonable that of three attachable containers as well as one attachable container on top of a wheeled container (original fig 1), but not two attachable containers, is part of the invention. Would the subject matter of two attachable containers not reasonably convey to someone skilled in the relevant art when the inventor had possession of the subject matter of one attachable and three attachable containers on top of a wheeled container? The applicant confesses that he does not understand the area of new matter and respectfully puts forth this reasoning and request for response for references and answers to these questions. It is understandable that an inventor cannot keep improving his invention during the patent process without a new date for the improvement being recorded as well as for the practical reasons of examination in terms of additional burden, new issues and new searches. The addition of two or three attachable containers adds no new issues or burdens, and was actually discussed extensively in the Evans art. Applicant is convinced that there is no new matter or patent rule or that the general intent or spirit of the patent law is broken by the amended Fig 1. If this is not the case, the applicant respectfully requests a response.

d) the references on the front page to other patents should allow some skilled in the art to confirm that the inventor had possession of the invention at the time of filing.

e) why would someone, skilled in the art, after being shown the original Fig 1 and then told at least one attachable container, as well as being on top in claim 2, not be able to make or use the invention?



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f) under 35 U.S.C. 112 applicant has shown by the attached provisional patent drawing and the claim of "at least one attachable container" that at the time the application was filed, had possession of the claimed invention of two attachable containers. How do these two items not prove this?

Under 35 U.S.C. 112 Specification, the second paragraph states "the specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. Applicant's specification concludes with claim 1 "at least one attachable container", claim 2 "a plurality of attachable containers stacked and secured on top of said attachable container", and claim 11 "at least one attachable container, and a means for securing adjoining said wheeled container to said attachable container whereby the combined containers form a single rigid entity". These claims are the conclusion of the specification and with the attached drawing of the provisional patent and the original Fig 1 disclose the invention to enable someone skilled in the art to make and use the same. Under U.S.C. 113 are "The applicant shall furnish a drawing where necessary for the understanding of the subject matter" and in this case not even original Fig. 1 or the provisional patent drawing or the amended Fig 1 drawings are necessary and the amended Fig 1 drawing does not in any way add new matter that was not part of the original disclosure. What is the new matter that would add benefit to this invention that applicant has not already disclosed? Why are the drawings even necessary?

g) The original disclosure under Objects and Advantages page 4 of 13, "(k) the wheeled containers will nest in each other and the recycle containers will nest in each other and the wheeled containers will also nest in the recycle containers and **the lower size of recycle containers can partially nest in the upper size of recycle container**, thus being able to form a single pile of any number of sizes of recycle containers with the wheeled containers reducing shipping costs and distributor shelf space even for small quantities." The original disclosure states "**the lower size of recycle containers can partially nest in the upper size of recycle container**" clearly states that there are two sizes of recycle container in the one application, described as lower and upper. This proves that the applicant had knowledge and possession and disclosure in the original application supporting the amended fig. 1 showing two recycle containers, a lower and an upper. It is also not possible to construe the recycle container on top of the refuse container as the upper recycle container as it a round not square and definitely too small to allow the lower recycle bin to partially nest in it. How is the second, upper attachable recycle container not part of the original disclosure?

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Applicant makes the following amendment to the Operation under DEFINITION OF TERMS

**RUBBERMAID refuse container-** 'RUBBERMAID' refuse container refers to the 32 wheeled refuse container that is tilted for rolling having the Ferbrache handles for lifting and lid fastening as show in Fig 8, 9, 10 and identification/ description in the specification and claims will be defined by the term 'RUBBERMAID refuse container' and since many of the claims refer to this specific container and handles, it is imperative to use this term. The term 'RUBBERMAID refuse container' in this patent in the disclosure and claims will include all of the following limitations and descriptions as described in the US 4,691,840 FERBRACHE patent:

A refuse container comprising:

a receptacle body having vertical side walls and a central cavity extending downwardly there between;

a lid having a downturned peripheral rim receivable over a top end of said receptacle body, said lid having peripherally located detent means;

at least one lid locking handle having an inward end pivotally coupled to said receptacle body side walls and an outward free end; said handle having camming handle locking projection means and lid locking projection means for respective engagement against said receptacle body side walls and said lid detent means as said handle free end is pivoted toward said receptacle body.

2. A refuse container according to claim 1, wherein a portion of said handle free end extends above a top surface of said lid.

3. A refuse container according to claim 1, wherein said handle locking projection means comprising at least one eccentric camming lobe disposed to rotate over said receptacle body side walls into a fixed, locked position.

4. A refuse container according to claim 3, wherein said receptacle body is formed of elastomeric plastics material deformable inwardly under influence of said camming lobe.

5. A refuse container according to claim 4, wherein said camming lobe residing in a vertically extending recess formed within said receptacle body.

6. A refuse container according to claim 5, wherein said lid locking projection means comprising a tooth extension projecting parallel and spaced apart from said camming lobe.

7. A refuse container according to claim 6, wherein said lid detent means being located in said lid peripheral rim.

8. A refuse container according to claim 7, wherein said lid detent means comprising a

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continuous groove in said lid peripheral rim adapted to receive said handle tooth extension therein

9. A refuse container according to claim 8, wherein said lid and said receptacle body being of circular horizontal cross section whereby said lid is situatable upon said receptacle body throughout a 360 degree range of orientation

10. A refuse container according to claim 1, wherein said lid locking handle having a generally U-shaped profile, comprising parallel arm segments extending from a central bight portion, with remote ends of said arm segments being pivotally coupled to said receptacle body.

11. A refuse container according to claim 10, wherein said handle locking projection means comprising at least one eccentric camming lobe disposed at a distal end of said handle and adapted to rotate over said receptacle body into a fixed locked position.

12. A refuse container according to claim 11, wherein said receptacle body being composed of resilient elastomeric plastics material deformable inwardly under influence of said camming lobe whereby said receptacle body exerting a residual outwardly directed frictional lock against said camming lobe in said fixed locked position.

13. A refuse container comprising:

a receptacle body having vertical side walls and a central cavity extending downwardly therebetween,

a lid having a downturned peripheral lid receivable over said top end of said receptacle body and said lid having peripherally located detent means;

at least one generally U-shaped handle comprising two parallel arm segments extending from a central bight portion, with distal ends of said handle arm segments pivotally coupled to said receptacle body, whereby said bight portion swinging toward said receptacle body into a locking position and away from said receptacle body into a release position; at least one said handle arm segment having spaced apart handle locking means and lid locking projection means to respectively engage said receptacle side walls and said lid detent means as said handle bight portion is pivoted toward said receptacle body.

14. A refuse container according to claim 13, wherein said handle bight portion extending above the top surface of said lid in said locking position.

15. A refuse container according to claim 14, wherein said lid and said receptacle body being of substantially circular in horizontal cross section.

16. A refuse container according to claim 15, wherein said lid detent means comprising a continuous groove formed in said lid peripheral rim.

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17. A refuse container according to claim 16, wherein said lid locking projection means comprising a tooth projection profiled for receipt into said lid rim groove.

18. A refuse container according to claim 13, wherein said handle locking means comprising an eccentric camming lobe disposed to rotate over said receptacle as said handle bight portion is rotated into said locking position.

19. A refuse container according to claim 18, wherein said receptacle body being composed of resilient plastic materials deformable inwardly as said camming lobe rotates thereover, whereby said receptacle body exerting outwardly directed resilient forces against said camming lobe in said locked position.

20. A refuse container, according to claim 19, wherein said camming lobe residing in a vertical track recess formed in said receptacle body.

The following definition of terms were added in the first amendment.

**rigid entity-** is the term given to the new, single, container that is formed by securing at least one (first) attachable container on top of a wheeled container. It is also the term given to the new single container that is formed when a second attachable container is secured on the first attachable container which is already secured to the wheeled container. This also pertains to a third attachable container on top of the second, fourth on top of the third, etc. The word **single** is an adjective to further clarify the description of the new entity formed from the multiplicity of containers as a single container that functions in terms of tilting and rolling as a single container. It commonly precedes the two words "rigid entity".

**means for securing-** is the physical element that mechanically fastens between or across the interface of either a wheeled container and first attachable container, or first attachable container and second attachable container, or second attachable container and third attachable container, etc. The Ferbrache handles (4) are the preferred embodiment and several standard types of hardware or joint design are shown in the alternative embodiments in Figures 4-8.

**secure-** is the action of engaging the means of securing

**hitch -noun-** is the physical element that fastens two tilted for rolling, wheeled, containers together (One or both of the containers may be either a taller one piece container such as a refuse container, or a rigid entity. These hitched containers each have their own wheels which rest separately on the floor, thus forming the "cars of a train") Fig 4 is the referred embodiment of a hitch which are used with the Ferbrache handles. Other examples of a hitch may be a flexible strap

**hitch- verb -** also hitching, hitched- this is the action of fastening two tilted for rolling, wheeled containers together where one or both of the containers may be either a taller one piece container such as a refuse container, or a rigid entity.

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**adjoining -adjective-** refers to the containers directly in contact with one another, such as the wheeled container and the first attachable container. The wheeled container and second attachable container do not touch each other and hence are not considered adjoining.

"Adjoining" and "adjoin" do not refer to hitches or hitching, are not used as a verb, and are not part of the hitch or hitching operation.

**ergonomically comfortable tilting and rolling** - refers to a minimal height that the rigid entity must reach to allow an adult to tilt and then roll the rigid entity with their back or spine in the straightened position.

**tilted for rolling** - means that the wheeled container or rigid entity is tilted so that the center of gravity is shifted and held in position above the axis of the means for rolling in order to vertically balance the container in a coplanar direction perpendicular to the axis of rotation. This is typically in excess of a 10 degree angle (for symmetrical evenly loaded containers) between the vertical axis of the container in its free standing position and it's tilted position

The luggage container designs were also discussed as possible prior art but there are no designs that utilize the applicant's claimed structure of using the attachable container to lengthen the shorter wheeled container to make tilting for rolling ergonomically comfortable. All luggage designs offer an extending handle that the elongates from the wheeled luggage container and an attachable container that is secured to this handle, not to their adjoining container. (There are also no luggage systems that have hitched, tilted for rolling, containers).

### Art Rejections

#### 1. TOLBERT'S SYSTEM WILL NOT FUNCTION FOR ROLLING IN THE TILTED POSITION

APPLICANT IS NOT CLAIMING HITCHING OF WHEELED CONTAINERS THAT ARE VERTICAL FOR ROLLING, BUT CLAIMING TILTED HITCHING FOR HITCHED CONTAINERS THAT ARE TILTED FOR ROLLING

Applicant agrees with the examiner that hitching of containers is not novel where containers that are rolled in the vertical free standing position with castored wheels are hitched, or in the case where two non-castored wheels are located under the center of gravity of the container and the container vertically stabilized by a single lead hitch or both lead and trailing hitch such as in an amusement park train. Applicant is not claiming hitching a fourth or any other number of containers to Tolbert's system. However, applicant's claim is limited to the hitching of tilted for rolling containers, which is uncontested by any prior art in any field, including luggage, where there is clearly a long felt need.

Even if Tolbert rearranged his wheel positions, reduced the number of wheels to two, and changed these two to non castoring wheels, the system would not function in the tilted

position because the hitch which is located centrally along the vertical height, would result in the top of the trailing container binding on the top left or right sides of the leading container as the train travels about a curve or incline. Even after changing the wheels, if the hitch was moved to the top of the containers, the additional height increase caused by the tilting would lift the towed container off the ground before the balance point was reached. If the handle was then lengthened to prevent the lifting, the container sides would not be able to touch each other in unless they are unhitched. Even with the single wheel located at it's furthest forward location, Tolbert's container slightly tilted would result in the bottom edge, in front of wheel, rubbing on the ground

(The following argument will be referred to as the **perimeter restriction or volume restriction or capacity restriction**) - Tiramani has a total volume of 22 gallons with the wheeled container and 3 fastened containers, which follows or is similar to luggage devices that are stacked. Both Tiramani's and the luggage industry have devices having the same base perimeter dimensions of approximately 170 inches. Tiramani's actual wheeled container perimeter is 52 but a 1 inch protrusion is added to the depth to improve vertical stability. Tiramani's maximum volumetric capacity of the sum of the system is determined by the combination of:

- a) a single lifting handle '92' centrally located on the top surface of the 'tool case 62' to allow single hand carrying typical of tool boxes in order to free the other hand for carrying another item or opening doors, etc.
- b) the 'tool case 62' has similar dimensions to typical single hand carried tool boxes, which has a 17 inch by 9 in perimeter and height of 8 inches plus a 4 inch high drawer totaling 12 inches. The 12 inch height holds a sufficient variety of tools and is higher than typical tool boxes (not available in store where applicant purchased having two drawers).
- c) the 9 inch depth is determined by the clearance needed to prevent tool box from rubbing against leg while carrying and walking.
- d) the height is determined by the typical person's weight carrying physical strength and the typical contents density, in this case tools (luggage may be higher and longer but not usually wider due to leg rubbing and lower weight density of contents.)

The combination of a), b), c) and d) determine the dimensions of Tiramani's 'tool case 62' with drawer container. The wheeled container perimeter is determined for practical, aesthetic, manufacture and space efficiency, to have the same perimeter and the height as typical tool boxes, being determined by the typical person's weight carrying physical strength for weight, also being 12 inches. The base of the wheeled container also has a one inch projection opposite to the axle to improve vertical stability when opening drawers. Applicant's novel design of 'overcomes the dimensional limitations or restrictions of Tiramani as well as luggage by having two lifting handles at opposite sides of container which allows for two armed lifting of container in front of body with option of resting lower edge of container on top portion of knees or thighs. This allows for larger perimeter containers on the depth (perpendicular to axial length) dimension, since leg rubbing during carrying and walking is no longer a restriction, the width (axial length) is determined by

shoulder width and arm divergence limitations, however door widths of 32 inches are the limiting dimension for width. Applicant overcomes the 9 inch depth restriction as well as the vertical instability because the weight limits are increased since the physical load is:

- a) balanced across the back not on one side of the back
- b) resting on two arms not one
- c) pulling forward on back muscles not single side muscles
- d) load can be partially supported by knees or thighs
- e) the application of curb side delivery does not require carrying of attachable container independent of wheeled container, as recycle goods are lifted off first and then refuse container moved to opposite side of driveway, or simply unhitched and tilted vertical as a rigid entity vertically stable enough to be stored in the secured configuration, unlike Tiramani's detachable tool box that is transported independently from the wheeled container, up and down stairs, congested work sites, restrictive areas, etc.
- f) the application of recycle goods and luggage are of a lower weight density than tools
- g) Applicant does not have awkward extendible handle that when collapsed is still extended 12 inches above the wheeled container upper edge having a single lifting point that is not centrally located on top of wheeled container, without any side handles, resulting in the wheeled container pivoting inwards and dragging up front of legs while not allowing enough movement in the comfortable lifting zone to clear the floor or trunk of vehicle because initial gripping point starts at 26 inches above ground.

Hence the tool box of Tiramani and the luggage bag both are carried on top having single handle that must be lifted and carried with a single hand requiring weight capacity restriction and depth restriction due to tool box rubbing against legs while carrying. Applicant has overcome this paradigm by securing containers lifted by both hands on two handles so weight capacity can be greater and container rests on front of thighs while carrying. Hence, **Applicant's novel approach overcomes the perimeter restriction of the one handle one hand held attached container.**

-The telescopic handle limits the container height above the gripping point due to overhanging of containers protruding above the gripping section and crushing against the arm or backside of the person's vertical body while tilted. Applicant has overcome this long felt limitation by forming rigid entities allowing larger base perimeters of the wheeled container, and in the specific retrofit to the RUBBERMAID refuse container, the height of the pulling handle is higher and the attaching interface diameter large enough to allow a significant volume to be added without significant increase to the protrusion above the handle a volume of at least 45 gallons up to 80 gallons or more.

Tiramani teaches fastening devices not handles. Applicant has shown an overcenter clasp with lifting handle in fig 7 of the alternate embodiments. Such handles are generally found on portable picnic coolers. If Tiramani's fastening devices were to be for lifting he could have used such handles or modified the toggle portion of his snapping mechanism to have an opening for the hand.

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-Applicant's application requires relatively high volume containers having relatively few divisional compartments and frequent periodic use, as compared to Tiramani. Recycle and refuse containers are moved usually once per week and usually require two to three recycle bins and two refuse containers, depending on municipality and family size. The overall number of divisional compartments would be four as compared to Tiramani's 24 compartment tool box, and a volume of 100 gallons as compared to 17.22 gallons of Tiramani's one wheeled container with 2 fastened tool boxes assembly (22 gallons with 3). A single refuse container of 32 gallons is almost double in capacity and a recycle bin single rigid entity of three bins would probably be in the order of 90 gallons or 5 times the volume of Tiramani. The hence Applicant's total hitched typical hitched volume of two refuse and one three container recycle bin would be 154 gallons compared to Tiramani's 17.22 gallons. This is a factor of approximately 9. It is unlikely and not typical that a person working on site would require nine of Tiramani's tool box assemblies or even 2 nor would someone need a recycle bin system with 216 different compartments. Tiramani system cannot be expanded for one assembly and certainly not a hitched assembly to have the volumetric capacity similar to applicant's.

**the applicant requests reconsideration of the 35 U.S.C. 102(b) rejection of claims regarding the new use for the Ferbrache handle for the following reasons of patentable distinction from Ferbrache for the following reasons with the regards to the amendments and the defined terms ;**

The Examiner has stated that "Ferbrache discloses a lid which is a second container resting on a first container, the handle of hitch both connects the second container and pulls the first container "

The following elaborates the **distinctions of means and function over Ferbrache:**

- the lid of Ferbrache has a horizontal surface that is located above the vertical sides when attached,
- applicant has a horizontal surface that is located below the sides when attached
- the sides of the Ferbrache lid cannot prevent contents from sliding off when tilted for rolling or piled to any significant height;
- applicant's container sides prevents contents from sliding off when tilted for rolling or piled to any significant height up to and even beyond the top edge of the sides
- the sides of Ferbrache adds no height to the wheeled container to increase the overall height ;
- the sides of applicant adds height to the wheeled container to increase the overall height forming an extension to bring the shorter wheeled container to the same height as the refuse container and lid
- the lid of Ferbrache has a horizontal surface that is convex upwards when attached;
- applicant has a horizontal surface that is flat when attached
- the sides of Ferbrache rest outside of the top edge of wheeled container;



the sides of applicant rest inside of the top edge of wheeled container

- the lid of Ferbrache has a lid handle across the horizontal surface for lifting,
- the container of applicant must be gripped and lifted by edges (if no handles) or Ferbrache handles,
- Ferbrache has a lid handle across the horizontal surface for lifting;
- applicant has a horizontal surface where the contents to be moved are located on top where Ferbrache has placed lid handle
- the handle of Ferbrache has never been part of a hitch or used as a hitch;
- applicant hitches wheeled containers to other wheeled containers and rigid entities
- Ferbrache has a refuse container with a handle locking a lid onto a refuse container;
- Applicant has the same handle securing a recycle bin onto the same refuse container
- Ferbrache's lid is placed on refuse container with edge below convex face;
- Applicant's container is placed on refuse container with edge above flat bottom face
- Ferbrache's lid has no containment sides;
- Applicant's container has containment sides
- Ferbrache's lid has a height of 6 inches, of which two inches are a handle protrusion on top;
- Applicant has a container typically between 6-30 inches in height
- Ferbrache has a handle protrusion on top of lid for lifting lid off with one hand;
- applicant has 2 Ferbrache lifting handles to lift the container and as well to secure a second attachable container on top. Ferbrache does not have his handles on lid for lifting lid off as he does on the refuse container
- Ferbrache's lid will remain in position when the refuse container is rotated up 85 degrees or laid on its side with the lid unfastened by the handles without it toppling off,
- Applicant's container with topple off if unsecured if tilted for rolling.
- Ferbrache's lid has no contents to produce a upward rotational force or moment against the bottom of tooth projection 16 of the handle adjacent to the axle during tilting, whereas Applicant's container even without contents will produce a moment sufficient to cause toppling of container if not secured. With contents filling attachable container, the moment is even greater.
- Ferbrache only requires the fastening function of the handles for purposes of lid locking in the events of wind or animals, typical of most refuse containers, Applicant does not need lids on recycle bins as animals are not interested in newspaper or plastic, and attachable container functions also like a lid for the container below it. Ferbrache's separately attached handles during fabrication allows blow molding rather than injection molding of the refuse container to include handles as part of the refuse container.
- Ferbrache's lid is horizontally fixed by the outer surface of the upper perimeter of the refuse container; Applicant's attachable container is horizontally fixed by the inside surface of the upper perimeter of the wheeled container
- Ferbrache's lid is horizontally fixed by the inside surface of the lid's inside perimeter to the refuse container;
- Applicant's attachable container is horizontally fixed by the bottom outside surface of the bottom perimeter of the attachable container to the wheeled container.

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**THE FERBRACHE HANDLE IS CLAIMED AS A NEW USE PATENT FOR SECURING ADJOINING CONTAINERS AS WELL AS HITTING TILTED FOR ROLLING CONTAINERS**

Not only is Ferbrache handle novel in terms of a new use for securing adjoining containers, it is even more remarkably novel in terms forming part of a tiltable hitch, especially when tiltable hitching by itself is novel. Applicant does not claim the Ferbrache handle as lid locking device, but rather as a new use for securing adjoining containers and hitching containers. If lids and handles are used for spillage prevention or lifting, this is not intended or claimed in any way, to be novel.

The applicant requests reconsideration and allowance of the claims with regards to Ferbrache under 35 U.S.C. 102(b) according to the reasons above.

**the applicant requests reconsideration of the 35 U.S.C. 103(a) rejection of claim 1 for the following reasons of patentable distinction over Tiramani 1 and Tiramani 2 for the following reasons;**

- Tiramani teaches that fastening a container onto a hand dolly which has a container integrated with the lower section of the hand dolly
- Tiramani teaches extending the handle of the dolly to allow convenient transportation in vehicles; Applicant teaches convenience by nesting and elimination of handles, telescopic handles, dollies, carts
- Tiramani teaches fastening two containers by separate fastening devices from that for pulling; Applicant uses handles for securing, pulling and hitching
- If the Applicant's attachable container as shown in the original Fig was modified to fit on top of Tiramani's wheeled container and it's volume approximated in reference to the 32 gallon RUBBERMAID refuse container, the total height would be approximately 5 ft high
- Tiramani's handle would hinder the dumping of the wheeled container
- Tiramani's wheeled container has a unremovable top so that it is not possible to dump the container by inversion

**Tiramani's system inoperable as a recycle bin and refuse container**

- Tiramani's container would require the waste collection person to hold the wheeled container upside down with one hand on the extended handle, since the fastening devices have no opening for gripping for the palm of the hand (the weight of 32 gallons of refuse could not be held inverted by finger pressure of one hand squeezing the toggle flap portion of the fastening device) while at the same time opening with the other hand the unlocked "front lock 128" and opening "bin 128 in casing 126"

- Tiramani teaches boxes with multifaceted compartments and drawers, Applicant teaches simple open top containers

- Tiramani teaches container that cannot nest one container in another, recycling and refuse containers must nest in each other for reasons of transport, storage during and after purchase, and this is especially important with the much larger and low cost containers. Even if there were no top on Tiramani containers, the nontapered sides and multifaceted compartments and drawers would not permit nesting. Applicant's nested containers may be transported from curb by carrying

- Tiramani teaches a total volume of 22 gallons with the wheeled container and 3 fastened containers, which follows or is similar to the teaching of luggage devices that are stacked. Both Tiramani's and the luggage industry's teaching has resulted in devices having the same base perimeter dimensions of 170 square inches. Tiramani's maximum volumetric capacity of the sum of the system is determined by the combination of:

a) a single lifting handle '92' centrally located on the top surface of the 'tool case 62' to allow single hand carrying typical of tool boxes in order to free the other hand for carrying another item or opening doors, etc.

b) the 'tool case 62' has similar dimensions to typical single hand carried tool boxes, which has a 17 inch by 9 in perimeter and height of 8 inches plus a 4 inch high drawer totaling 12 inches. The 12 inch height holds a sufficient variety of tools and is higher than typical tool boxes. (not available in store where applicant purchased having two drawers).

c) the 9 inch depth is determined by the clearance needed to prevent tool box from rubbing against leg while carrying and walking.

d) the height is determined by the typical person's weight carrying physical strength and the typical contents density, in this case tools (luggage may be higher and longer but not usually wider due to leg rubbing and lower weight density contents.)

The combination of a), b), c) and d) determine the dimensions of the Tiramani's 'tool case 62' with drawer container. The wheeled container perimeter is determined for practical, aesthetic, manufacture and space efficiency, to have the same perimeter and the height again by the typical person's weight carrying physical strength for weight, also being 12 inches. The base of the wheeled container also has a one inch projection opposite to the axle to improve vertical stability when opening drawers.

Applicant's novel design of overcomes the dimensional limitations or restrictions of Tiramani as well as luggage by having two lifting handles at opposite sides of container which allows for two armed lifting of container in front of body with option of resting lower edge of container on top portion of knees or thighs. This allows for larger perimeter containers on the width dimension, since leg rubbing during carrying and walking is no longer a restriction, the width is determined by shoulder width and arm divergence limitations, however door widths of 32 inches are the limiting dimension for width. The 9 inch depth restriction is overcome as well as the vertical instability.

The weight limits are increased because:

- a) the physical load is balanced across the back not on one side of the back
- b) the physical load is resting on two arms not one
- c) the physical load is pulling forward on back muscles not single side muscles
- d) the physical load is partially supported by knees or thighs

- e) the application of curb side delivery does not require carrying of attachable container independent of wheeled container, as recycle goods are lifted off first and then refuse container moved to opposite side of driveway, or simply unhitched and tilted vertical as a rigid entity vertically stable enough to be stored in the secured configuration, unlike Tiramani's detachable tool box that is transported independently from the wheeled container, up and down stairs, congested work sites, restrictive areas, etc.
- f) the application of recycle goods and luggage are of a lower weight density than tools
- g) Applicant does not have awkward extendible handle that when collapsed still extends 12 inches above the wheeled container upper edge having a single lifting point that is not centrally located on top of wheeled container, without any side handles, resulting in the wheeled container pivoting inwards and dragging up front of legs while not allowing enough movement in the comfortable lifting zone to clear the floor or trunk of vehicle because initial gripping point starts at 26 inches above ground.

The tool box of Tiramani and the luggage bag both or carrying on top having single handle that must be lifted and carried with single hand requiring weight capacity restriction and depth restriction due to tool box rubbing against legs while carrying. Applicant has overcome this paradigm by securing containers lifted by both hands on two handles so weight capacity can be greater and container rests on front of thighs while carrying. **Applicant's novel approach overcomes the perimeter restriction of the one handle one hand held attached container.**

-The telescopic handle limits the height due to overhanging of containers protruding above the gripping section and crushing against the arm or backside of the person's vertical body while tilted; Applicant has overcome this long felt limitation by forming rigid entities allowing larger base perimeters of the wheeled container, and in the specific retrofit to the RUBBERMAID refuse container, the height of the pulling handle is higher and the attaching interface diameter large enough to allow a significant volume to be added without significant increase to the protrusion above the handle a volume of at least 45 gal up to 80 gal

Tiramani teaches fastening devices not handles. Applicant has shown an overcenter clasp with lifting handle in fig 7 of the alternate embodiments. Such handles are generally found on portable picnic coolers.

- Tiramani teaches fastening devices on sides coplanar to wheels; applicant teaches handles perpendicular to wheels so that even if Tiramani eliminated telescopic handle, the fastening devices would require modification for gripping, pulling while fastened, and relocation to perpendicular to wheels
- Tiramani teaches contents are removed independently through side located doors, Applicant enters through top opening and empties by entire contents simultaneously dumping
- Tiramani teaches top tool boxes moved and used independently of wheeled container and requires telescopic handle; Applicant containers not moved or used independently of wheeled container

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- Tiramani teaches containers located inside tool boxes which are piled and fastened to a dolly or cart, Applicant's containers eliminate the cart by forming a rigid entity out of two or more containers
- Tiramani is a toolbox system and portable work bench, Applicant is a container system
- Tiramani teaches openings through side or vertical face, Applicant has openings at top or smaller side opening for loading while still allowing containing or holding

**Tiramani is inoperative as a recycle bin / waste container (see above arguments as well). Tiramani would require the following modifications to operate**

- removal of top portion of fastened containers and of wheeled container to make opening,
- removal of telescopic handle, trays, drawer "front lock 128", "bin 128 in casing 126"
- opening for gripping for the palm of the hand (the weight of 32 gallons of refuse could not be held inverted by finger pressure of one hand squeezing the toggle flap portion of the fastening device) in toggle portion of fastening device

**Tiramani solves different need** of transporting tools and toolboxes. Applicant solves need to move a recycle bin on an existing refuse container. No where does Tiramani mention recycle goods or the RUBBERMAID refuse container.

RUBBERMAID refuse container is 20 years old and common and so are recycle bins and it would require very little modification to a bin to fit on the RUBBERMAID refuse container, yet Tiramani, Newell/Rubbermaid company, or anybody else has suggested this solution to a long felt but unresolved need requiring very little modification to a recycle container relative to the many modifications required (see modifications above) to make Tiramani containers function as a refuse container recycle bin

**Unexpected results** confirms Applicant's novel approach:

- of one less trip to curb come from the new use of the existing Ferbrache handles
- secure transport, and not just resting, of the recycle bin by handles that have always been used for lifting and lid holding.
- no physical lifting during transport of recycle bin
- the lid, which has been transported on top of recycle bin while also keeping loose light recycle goods from falling out while tilted, is then replaced to secure the contents of the waste container without having to take another trip to get it, and also securely rests within the similar shaped larger perimeter of the recycle bin
- the overall vertical stability is actually improved by adding the height of the recycle bin because the top edge, or handle if part of the bin, provide a second gripping point that is located along the forward edge (unlike the container with the lid on with gripping ridge running across middle of container diameter) and the second gripping edge being vertically above at a significant distance to provide leverage or stabilizing moment to produce vertical stabilization.
- dripping of dirty water from bin onto legs is avoided
- weight of recycle bin and contents help to compress contents of overfilled waste containers

- the added height is ergonomically more comfortable, especially for tall people since the present height is minimized to increase the base perimeter.
- one less trip back from the curb
- physically easy transport back from the curb
- a recycle bin with handles (if included)
- a recycle bin with handles (if included) for easy lifting in terms of grip as well as vertical extension to reduce bending over.
- the reduced space requirement when stacked in home or at end of driveway for smaller families in smaller residences.

The combination of novel ideas for this particular part of the invention require the following combination of obstacles to be overcome in order to function. The obstacles teach that it is not possible or **teach away** from the invention. As well, the **assumed insolvability**, by those skilled in the art for the following:

- adding of even more height to an already vertically unstable container is overcome because the attached container is placed on top before transport and taken off after brought to the windy, nonlevel curb, where stray dog or raccoons will easily topple the container which would then roll onto the road. The overall vertical stability during transport is actually improved by adding the height of the recycle bin because the top edge, or handle (if part of the bin), provide a second gripping point that is located along the forward edge (unlike the container with the lid on with gripping ridge running across middle of container diameter ) and the second gripping edge being vertically above at a significant distance to provide leverage or moment to produce vertical stabilization
- The lid, which has been transported on top of recycle bin while also keeping loose light recycle goods from falling out while tilted, is then replaced to secure the contents of the waste container without having to take another trip to get it.
- replacing a lid with a container
- replacing a lid with a container when the container is to be moved
- replacing a lid with a container when the container is tilted during movement
- replacing a lid with a container when the particular handles have always been used for holding lids and lifting waste containers, not securing recycle bins
- replacing a lid with a container where the particular handles happen to have sufficient holding capability to secure, unlike most lid holding devices on other waste containers that barely hold the lid on
- the lid, which has been transported on top of recycle bin while also keeping loose light recycle goods from falling out while tilted, is then replaced to secure the contents of the waste container without having to take another trip to get it and also securely rests within the similar shaped larger perimeter of the recycle bin.
- the RUBBERMAID refuse container has been widely used and known for twenty years and has not had a recycle bin secured to it.

**The invention is contrary to the prior art:** the prior art teaches recycle bins should be transported together at a different time by a different device such as a cart unlike the

Applicant's approach of waste and recycle goods simultaneously. Tiramani teaches transporting tools with tools.

The 55 inch perimeter base is not obvious nor is it possible due to the perimeter restriction argument. Tiramani realizes the instability and adds a flanged protrusion to the base of the wheeled container, but as explained in the perimeter restriction argument, is unable to increase the actual base of the wheeled container. Also explained in the volume restriction argument, Tiramani is unable to increase the volume of his container. Claim 1 has been amended to wherein and whereby, with a proposed amendment to remove the "and whereby" to define a positive recitation with respect to the volume as well as the perimeter

All of the above clearly prove the novelty and unobviousness of claim 1. The hitching of rigid entities and a second or third RUBBERMAID refuse container to complete the system, is even more unobvious and novel and should be considered with respect to all the benefits etc. of the tilted hitching aspect.

The applicant request reconsideration for the above reasons.

**the applicant requests reconsideration of the 35 U.S.C. 103(a) rejection of claims as being unpatentable over Tiramani 1 and Tiramani 2 in view of Ferbrache to modify the connection between the containers to be the handle of Ferbrache in order to provide a means for easy lifting by handle grasping, as well as a latch in the in the same assembly to enhance the transportability and storage without adding parts. Reconsideration is requested for the following reasons;**

**1. Even if Tiramani and Ferbrache could be combined, they teach away, expressly or by implication from the suggested combination with the Ferbrache handle, since Tiramani teaches handles on forward and behind sides of axle while Tiramani teaches snapping mechanisms at both (axle end) sides. If the handles for lifting were placed handles on forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles and would teach against conventional luggage design having fastening devices at the ends.**

**2. The proposed combination is made inoperative by the Ferbrache handles unable to hold the heavier tools than recycle goods due to the higher density as well as the narrow front to rear depth of Tiramani's 9 inch compared to Applicant's 27 inch or**

more depth resulting in greater moment of the container edge on the tooth projection due to the shorter moment arm (in this case 9 to 27 or three times greater force). Clearly the inoperativeness of the weaker holding strength of the Ferbrache handle assumed to be designed for lid locking with a zero content no moment load of a lid, renders the combination unobvious.

The inoperativeness of the drawers opening with the Ferbrache handle on the rear face of the wheeled container projecting upward would prevent the drawers or carousel from opening or if projecting downward, prevent the wheeled container tilt out basket from opening.

If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making lifting awkward as the ends protrude into the body while lifting.

If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles.

**3. The Tiramani container would require the following modifications if snapping mechanisms 66 are construed as handles:**

- relocating the handles from sides to front and rear
- modification of the Ferbrache handle to increase it's securing strength
- modification of the Ferbrache handle to prevent folding downward and blocking drawer, carousel or basket operation
- increasing the space between containers to allow room for the Ferbrache handles and corresponding redesign of the containers to recover the increased height lost
- If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles. Thus the telescopic handle would have to be redesigned to clear the Ferbrache handles

These changes require major modifications relative to the complexity of Tiramani's design, and clearly makes combining unobvious.

**4. The Tiramani container would require the many previously stated modifications, an additional part which is the hitch, and would still be inoperative.**

It is clear that Tiramani does not have handles but "snapping mechanisms 66" and has a single "pulling handle 56" located on the back side over the axle. If the "pulling handle 56" was to be hitched to a pulling handle 56 of a second container assembly by the addition of a hitching device similar to Applicant's, which Tiramani does not have or suggest, then the back side of the second hitched container would lift off the ground as it fulcrums on the top horizontal corner above the non axle front side not only when tilted but also prior to tilting in the vertical free standing position. If the pulling handles were hitched with the back pulling sides facing each other, then when tilted the container assemblies would form an inverted 'v' or pyramid and could not be accessed by pulling in front of, or if accessed



by walking beside the inverted 'v' the lead container would not be steerable but instead would steer the assembly in an uncontrolled manner making the proposed configuration inoperable.

If the "snapping mechanisms 66" are to be construed as handles and hitch by the addition of a hitching device similar to Applicant's, which Tiramani does not have or suggest, then the container assemblies would form an 'L' shape as viewed from above where one of the trailing container wheels would lift off the ground and drag rather than roll, or if tilted so that the axles remain end to end the containers would not resemble Applicant's hitching but more of side by side configuration. Applicant includes these arguments for the record but respectfully believes that the examiner is suggesting moving the both "snapping mechanisms 66" as Ferbrache to front and rear positions. Additional modified "snapping mechanisms 66" would then have to be added at the top of the upper most tool box even though no fastening devices are required since hitching "snapping mechanisms 66" below the top edge for hitching would result in releasing the container being fastened for hitching, resulting in the top container of the lead container assembly to fall off, rendering the combination inoperative.

#### **5. Nonanalogous art**

Tiramani's maximum volumetric capacity of the sum of the system is determined by the single lifting handle '92' centrally located on the top surface of the tool box or 'toolcase 62'. This is explained in detail in the Tiramani 102 arguments as perimeter or volume restriction argument. This reason and the reason above of "There is no logical reason to combine" clearly demonstrates the different, use, capacity, needs and hence technical field of invention making the proposed combination nonanalogous art.

**6. Ferbrache takes a different approach from Tiramani and reaches a different solution to a different problem. Since they teach away from each other, it would not be logical to combine them. Ferbrache teaches holding lids on refuse containers while Tiramani teaches fastening tool boxes to a wheeled tool box cart having a telescopic handle.**

Clearly Tiramani has no wheeled refuse or recycle container, and Ferbrache has no tool box nor tool box lid to fasten since it is hinged and lifted with one hand in the center of the lid. Therefore, it would not be logical for someone skilled in the art to remove one of the toolboxes from the top of Tiramani's wheeled tool boxes and fasten or attempt to bind it on top of Fabricate's refuse container, nor would it be logical to hitch a refuse container to Tiramani's container.

**7. Each of the Ferbrache and Tiramani systems is individually complete and functional in itself, so there would be no reason to use parts from Ferbrache's to improve Tiramani's.**

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Tiramani does not see two handed lifting of containers necessary because if he did would of used handles instead of 'snapping mechanisms 66' as well as it also it goes against standard single handle toolbox design and would result in a total of 3 handles since a single handle centrally located on top is still necessary to allow one free hand for door opening or carrying other items. Ferbrache has no need to add a second refuse container on top of the 32 gallon container.

**8. Ferbrache nor Tiramani do not contain any suggestion, expressed or implied, that they be combined in the manner suggested.**

Neither Ferbrache nor Tiramani in their objectives of their inventions, or any where else, express or imply any suggestion that their systems are incomplete or should be expanded or combined with other methods to produce other results.

**9. Even if combined, the synergism is less than applicant's**

The whole, that is the result achieved by applicants invention, is greater than the sum of the parts, as of the combination. Applicants invention produces the many new and unexpected results as a direct result over the combination. Some of the results that are produced that are not found in the combination are the hitching which remains hitched when tilted to and from the free standing position and will not remain free standing in the tilted position as explained in the inverted 'v' / elongated action of the Ferbrache handles, and so clearly the combination is not obvious and even when combined do not disclose the invention, nor sums up to the whole of the invention in terms of results

**10. New and unexpected results are obtained from the use of the Ferbrache handle:**

When the Ferbrache handle is used with Applicant's hitch for tilted hitching the particular distance of the gripping section to the container side results in the ability of containers being able to be tilted as the two hitched handles can elongate into a flat coplanar configuration when tilted from the inverted 'v' while in the free standing position and also remain stable free standing in the tilted position as shown in Fig 9, 10 and 11. Hence tilted hitching, which is clearly novel over Tiramani and since the extended handle hitched to a Ferbrache handle would not allow this coplanar / 'v' action and hence is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

As well, tilted for rolling containers also remaining hitched while vertically free standing is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

As well, tilted for rolling containers also remaining hitched while tilted free standing is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

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As well the use of the Ferbrache handle, designed for lid locking and lifting, used as a means for securing attachable containers, unexpectedly "provides a means for easy lifting for handle grasping" as examiner has stated when replacing Tiramani's 'snapping mechanisms 66' (however Tiramani fails to do so ) And since the snapping mechanisms 66 are not graspable for lifting even empty containers let alone heavy tool boxes nor do they have openings in the toggle portion, and since Tiramani has no graspable lifting edges but only single non centered extended handle for lifting the wheeled container or a single handle on the toolcase, the Ferbrache handles now provides two handed lifting capability, in turn allowing increased base perimeter of the wheeled container (as explained in 103 Tiramani / Tolbert combination arguments). As well reduced bending over for low attachable containers due to the height extension when handles up, and, not having awkward extendible handle that when collapsed still extends 12 inches above the wheeled container upper edge having a single lifting point that is not centrally located on top of wheeled container, without any side handles, resulting in the wheeled container pivoting inwards and dragging up front of legs while not allowing enough movement in the comfortable lifting zone to clear the floor or trunk of vehicle because initial lifting point starts at 26 inches above ground.

If lids and handles are used for spillage prevention, this is not intended or claimed in any way, to be novel or part of applicant's invention. The similar effect that the securing of a container on top has on the bottom container in terms of spill prevention is an unexpected result. Applicant clearly has shown that containers are not lids and that spill prevention is an unexpected result, from the novel means of forming a rigid entity.

Clearly from the applicant's reasons regarding the 103(a) Tiramani in view of Ferbrache, the invention is not disclosed nor can they be combined. Applicant includes these reasons in conjunction with the Ferbrache 102 reasons to obviate Applicant's novelty

The applicant requests reconsideration and allowance of the claims with regards to Tiramani in view of Ferbrache under 35 U.S.C. 103(a) according to reasons above

**the applicant requests reconsideration of the 35 U.S.C. 103(a) rejection of claim 3-6, 9, 10, and similar claims as being unpatentable over Tiramani 1 and Tiramani 2 in view of Tolbert to increase the storage space and variety of space. Reconsideration is requested for the following reasons;**

**1. The Tiramani container would require the many previously stated modifications, an additional part which is the hitch, and would still be inoperative.**

It is clear that Tiramani does not have handles but "snapping mechanisms 66" and has a single "pulling handle 56" located on the back side over the axle. If the "pulling handle 56" was to be hitched to a pulling handle 56 of a second container assembly by the addition of a hitching device similar to Applicant's, which Tiramani does not have or suggest, then the

back side of the second hitched container would lift off the ground as it fulcrums on the top horizontal corner above the non axle front side not only when tilted but also prior to tilting in the vertical free standing position. If the pulling handles were hitched with the back pulling sides facing each other, then when tilted the container assemblies would form an inverted 'v' or pyramid and could not be accessed by pulling in front of, or if accessed by walking beside the inverted 'v' the lead container would not be steerable but instead would steer the assembly in an uncontrolled manner making the proposed configuration inoperable.

If the "snapping mechanisms 66" are to be construed as handles and hitch by the addition of a hitching device similar to Applicant's, which Tiramani does not have or suggest, then the container assemblies would form an 'L' shape as viewed from above where one of the trailing container wheels would lift off the ground and drag rather than roll, or if tilted so that the axles remain end to end the containers would not resemble Applicant's hitching but more of side by side configuration. Applicant includes these arguments for the record but respectfully believes that the examiner is suggesting moving the both "snapping mechanisms 66" as Tolbert to front and rear positions. The "snapping mechanisms 66" would also require the modification of the toggle portion of the "snapping mechanisms 66" to accommodate the hitch since Tolbert's handles will not function for tilted hitching. Additional modified "snapping mechanisms 66" would then have to be added at the top of the upper most tool box even though no fastening devices are required since hitching "snapping mechanisms 66" below the top edge for hitching would result in releasing the container being fastened for hitching, resulting in the top container of the lead container assembly to fall off, rendering the combination inoperative.

## **2. There is no logical reason to combine**

Tiramani's single assembly is sufficient to bring a significant number of tools to a remote site, since usually one hand held tool box is sufficient even without the wheeled container or additional fastened draws and carousel, that a second assembly would rarely be needed and if it were, the infrequency and demand would render it not necessary to hitch. Applicant's application requires relatively high volume containers having relatively few divisional compartments and frequent periodic use, as compared to Tiramani. Recycle and refuse containers are moved usually once per week and usually require two to three recycle bins and two refuse containers, depending on municipality and family size. The overall number of divisional compartments would be four as compared to Tiramani's 24 compartment tool box, and a volume of 100 gallons as compared to 17.22 gallons of Tiramani's one wheeled container with 2 fastened tool boxes assembly (22 gallons with 3). A single refuse container of 32 gallons is almost double in capacity and a recycle bin single rigid entity of three bins would probably be in the order of 90 gallons or 5 times the volume of Tiramani. The hence Applicant's total hitched typical hitched volume of two refuse and one three container recycle bin would be 154 gallons compared to Tiramani's 17.22 gallons. This is a factor of approximately 9. It is unlikely and not typical that a person working on site would require nine of Tiramani's tool box assemblies or even 2 nor would someone need a recycle bin system with 216 different compartments. This would make combining Tolbert and Tiramani not obvious or practical nor would there be any logical reason to combine them.

**3. Nonanalogous art**

Tiramani's maximum volumetric capacity of the sum of the system is determined by the single lifting handle '92' centrally located on the top surface of the tool box or 'toolcase 62'. This is explained in detail in the Tiramani 102 arguments as perimeter or volume restriction argument. This reason and the reason above of "There is no logical reason to combine" clearly demonstrates the different use, capacity, needs and hence technical field of invention making the proposed combination nonanalogous art.

**4. Tolbert takes a different approach from Tiramani and reaches a different solution to a different problem. Since they teach away from each other, it would not be logical to combine them. Tolbert teaches hitching refuse containers while Tiramani teaches fastening tool boxes to a wheeled tool box cart with a telescopic handle.**

Clearly Tiramani has no wheeled refuse or recycle container, and Tolbert has no recycle container nor tilted for rolling refuse container. Therefore, it would not be logical for someone skilled in the art to remove one of the toolboxes from the top of Tiramani's wheeled tool boxes and fasten or attempt to bind it on top of Tolbert's refuse container, nor would it be logical to hitch a refuse container, that does not tilt when rolling, to Tiramani's container.

**5. Each of the Tolbert and Tiramani systems is individually complete and functional in itself, so there would be no reason to use parts from Tolbert's to improve Tiramani's.**

Tolbert would not require securing because it does not or cannot tilt, and adding the operation of securing would be a laborious disadvantage.

**6. Tolbert nor Tiramani do not contain any suggestion, expressed or implied, that they be combined in the manner suggested.**

Neither Tolbert nor Tiramani in their objectives of their inventions, or any where else, express or imply any suggestion that their systems are incomplete or should be expanded or combined with other methods to produce other results.

**7. Tolbert and Tiramani teach away, expressly or by implication from the suggested combination, since Tolbert teaches increasing the system capacity by hitching containers while Tiramani by stacking vertically.**

Tolbert teaches that if you want to increase the capacity of the system, then hitch more containers onto the train, not securing containers on top as suggested by the combination. Tiramani teaches a system that increases its capacity by stacking higher, not hitching. Both these teachings would lead someone skilled in the art away from a solution of combining to increase capacity.

Even when the capacities of each system is maximized, Tolbert would teach the obvious solution would be to start a second train, while Tiramani would teach obtain a second cart

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Both clearly teaching away from combination in terms of volume and variety as well as after maximum capacity is reached.

**8. Since the Tolbert system does not tilt for rolling, it would not be logical or obvious for someone skilled in the art to hitch the Tiramani system which is tilted because they teach away from each other**

**9. Even if combined, the synergism is less than applicant's**

The whole, that is the result achieved by applicants invention, is greater than the sum of the parts, as of the combination. Applicants invention produces the many new and unexpected results as a direct result over the combination. Some of the results that are produced that are not found in the combination are two handed lifting handles resulting in the overcoming of the dimensional limitation of the one handed tool box perimeter explained in the 103 Tiramani arguments, the proposed combination would not be able to remain hitched when tilted to and from the free standing position and will not remain free standing in the tilted position as explained in the inverted 'V' / elongated action of the Ferbrache handles, the inability to dump, nest, blow mold, and increase the base perimeter/ vertical stability and so clearly the combination is not obvious and even when combined do not disclose the invention, nor sums up to the whole of the invention in terms of results.

In the July/02 conversation, the examiner suggested a limitation of perhaps greater than 10 degrees of tilt to overcome Tolbert with regards to possible tilting that may result from impacting or acceleration of the Tolbert system. It was agreed that it is unreasonable to expect the Tolbert container to balance on the single lead wheel located in line and below the hitch. Even a single Tolbert container would be extremely difficult for a person to hold tilted at any angle, and that with Tolbert's hitching structure it would be impossible to roll a train of tilted containers each on their one single swivel front castor for any distance at even the slightest angle.

It was also agreed that the casters do not function when the plane of swivel of the castor is tilted relative to the plane of the surface of travel (floor). Since tilted hitching is not shown by Tolbert, it is inapplicable in combination with Tiramani, making the combination even more unobvious

The applicant requests reconsideration and allowance of the claims with regards to Tiramani in view of Tolbert under 35 U.S.C. 103(a) according to reasons above.

**the applicant requests reconsideration of the 35 U.S.C. 103(a) rejection of claims for being unpatentable over Tiramani 1 or Tiramani 2 in view of Tolbert and**

**further in view of Ferbrache (handle). Reconsideration is requested for the following reasons;**

1. Clearly from the applicant's reasons regarding the 103(a) Tiramani in view of Tolbert, the invention is not disclosed nor can they be combined. Applicant includes these reasons in conjunction with the Ferbrache 102 reasons to obviate Applicant's novelty. Applicant also gives the following reasons to be applied with regard to the claim 21 rejection with reference to the novelty of the Ferbrache handle.

**2. THE FERBRACHE HANDLE IS CLAIMED AS A NEW USE PATENT FOR SECURING ADJOINING CONTAINERS AS WELL AS HITCHING TILTED FOR ROLLING CONTAINERS**

Not only is Ferbrache handle novel in terms of a new use for securing adjoining containers, it is even more remarkably novel in terms forming part of a tiltable hitch, especially when tiltable hitching by itself is novel. Claim 21 does not claim the Ferbrache handle as lid locking device, but rather as a new use for securing adjoining containers and hitching. The 102 arguments for Ferbrache clearly show the distinction and novelty of the new uses over lid locking and lifting, so that viewing the use of lid locking and lifting for securing to form rigid entities and hitching is not relevant or applicable

**3. Tolbert, Tiramani and Ferbrache take a different approaches from each other and reaches a different solution to a different problem. Since they teach away from each other, it would not be logical to combine them. Tolbert teaches hitching refuse containers while Tiramani teaches piling and fastening a tool box and tool drawer on a wheeled hand dolly cart and Ferbrache teaches handles for locking lids and lifting.**

Even if Tiramani and Tolbert could be combined, replacing Tolbert's hitch (not handle, as Tolbert states it's function was for hitching, and pulling, not lifting) with a lifting / lid locking device that results in the loss of the lid locking as well as lifting, when moved to the central height location, is illogical. If the handle was located at the top, it still would not lock the lids because it would be in the open position during towing and the hitching at that location would result in the containers toppling forward when pulled.

**4. Each of the Tolbert, Tiramani, and Ferbrache systems is individually complete and functional in itself, so there would be no reason to use parts from Ferbrache and Tolbert's to improve Tiramani's.**

Tiramani does not see two handed lifting of containers necessary because if he did would of used handles instead of 'snapping mechanisms 66' as well as it also it goes against standard single handle toolbox design and would result in a total of 3 handles since a single handle centrally located on top is still necessary to allow one free hand for door opening or carrying other items. Tiramani would not need to hitch more than one tool container assembly since one is more than sufficient to hold a full selection of generally used tools as explained above.

**5. Tolbert, Tiramani and Ferbrache do not contain any suggestion, expressed or implied, that they be combined in the manner suggested.**

Neither Tolbert, Tiramani or Ferbrache in their objectives of their inventions, or any where else, express or imply any suggestion that their systems are incomplete or should be expanded or combined with other methods to produce other results.

**6. Even if Tiramani and Tolbert could be combined, they teach away, expressly or by implication from the suggested combination with the Ferbrache handle, since Tiramani teaches handles on forward and behind sides of axle while Tiramani teaches snapping mechanisms at both (axle end) sides.** If the handles for lifting were placed handles on forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles and would teach against conventional luggage design having fastening devices at the ends.

**7. The proposed combination is made inoperative by the Ferbrache handles unable to hold the heavier tools than recycle goods due to the higher density as well as the narrow front to rear depth of Tiramani's 9 inch compared to Applicant's 27 inch or more depth resulting in greater moment of the container edge on the tooth projection due to the shorter moment arm (in this case 9 to 27 or three times greater force).** Clearly the inoperativeness of the weaker holding strength of the Ferbrache handle assumed to be designed for lid locking with a zero content no moment load of a lid, renders the combination unobvious.

The inoperativeness of the drawers opening with the Ferbrache handle on the rear face of the wheeled container projecting upward would prevent the drawers or carousel from opening or if projecting downward, prevent the wheeled container tilt out basket from opening.

If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making lifting awkward as the ends protrude into the body while lifting.

If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles

**8. The Tiramani container would require the following modifications if snapping mechanisms 66 are construed as handles:**

- relocating the handles from sides to front and rear
- modification of the Ferbrache handle to increase its securing strength
- modification of the Ferbrache handle to prevent folding downward and blocking drawer, carousel or basket operation



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-increasing the space between containers to allow room for the Ferbrache handles and corresponding redesign of the containers to recover the increased height lost  
-If the handles for lifting were placed on the forward and behind sides of axle instead of snapping mechanisms at both axle end sides, the containers would have the handles on the long front and rear of the containers instead of the shorter ends making extension of the telescopic handle impossible as it would hit the Ferbrache handles. Thus the telescopic handle would have to be redesigned to clear the Ferbrache handles.

These changes require major modifications relative to the complexity of Tiramani's design, and clearly makes combining unobvious.

**9. Even if combined, the following applicant's claimed features are not met:**

- containers cannot nest within each other, nor similar containers within each other
- containers cannot be blow molded
- containers cannot be inverted for dumping
- the volume of fastened container assemblies are limited in volume due to the toolbox perimeter as explained in the Tiramani in view of Tolbert as explained 103a) arguments for claim 23, resulting in many more hitched containers for the same volume of Applicant's rigid entities.

So clearly the combination is not obvious and even when combined do not disclose the invention, nor meet the claimed features of the invention.

**10. Even if combined, the synergism is less than applicant's, since the combination of three inventions still does not disclose Applicant's invention**

The whole, that is the result achieved by applicants invention, is greater than the sum of the parts, as of the combination. Applicants invention produces the additional features of

- containers cannot nest within each other, nor similar containers within each other
  - containers cannot be blow molded
  - containers cannot be inverted for dumping
  - the volume of fastened container assemblies are limited in volume due to the toolbox perimeter as explained in the Tiramani /Tolbert 103a) arguments for claim 23, resulting in many more hitched containers for the same volume of Applicant's rigid entities
- so clearly the combination is not obvious and even when combined do not disclose the invention, nor sums up to the whole of the invention in terms of results.

**11. New and unexpected results are obtained from the use of the Ferbrache handle:**

When the Ferbrache handle is used with Applicant's hitch for tilted hitching the particular distance of the gripping section to the container side results in the ability of containers being able to be tilted as the two hitched handles can elongate into a flat coplanar configuration when tilted from the inverted 'v' while in the free standing position and also remain stable free standing in the tilted position as shown in Fig 9, 10 and 11. Hence tilted hitching, which is clearly novel over Tolbert's hitching or combination of Tiramani and Tolbert since the extended handle hitched to a Ferbrache handle would not allow this

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coplanar /'v' action and hence is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

As well, tilted for rolling containers also remaining hitched while vertically free standing is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

As well, tilted for rolling containers also remaining hitched while tilted free standing is a new and unexpected result from the new use of the Ferbrache handle designed for lid locking and lifting.

As well the use of the Ferbrache handle, designed for lid locking and lifting, used as a means for securing attachable containers, unexpectedly "provides a means for easy lifting for handle grasping" as examiner has stated when replacing Tiramani's 'snapping mechanisms 66' (however Tiramani fails to do so ) And since the snapping mechanisms 66 are not graspable for lifting even empty containers let alone heavy tool boxes nor do they have openings in the toggle portion, and since Tiramani has no graspable lifting edges but only single non centered extended handle for lifting the wheeled container or a single handle on the toolcase, the Ferbrache handles now provides two handed lifting capability, in turn allowing increased base perimeter of the wheeled container (as explained in 103 Tiramani / Tolbert combination arguments). As well reduced bending over for low attachable containers due to the height extension when handles up, and, not having awkward extendible handle that when collapsed still extends 12 inches above the wheeled container upper edge having a single lifting point that is not centrally located on top of wheeled container, without any side handles, resulting in the wheeled container pivoting inwards and dragging up front of legs while not allowing enough movement in the comfortable lifting zone to clear the floor or trunk of vehicle because initial lifting point starts at 26 inches above ground.

If lids and handles are used for spillage prevention, this is not intended or claimed in any way, to be novel or part of applicant's invention. The similar effect that the securing of a container on top has on the bottom container in terms of spill prevention is an unexpected result. Applicant clearly has shown that containers are not lids and that spill prevention is an unexpected result, from the novel means of forming a rigid entity

The applicant requests reconsideration and allowance of the claims with regards to Tiramani in view of Tolbert and further in view of Ferbrache under 35 U.S.C. 103(a) according to reasons above.

#### CONCLUSION

For all of the above reasons, applicant submit that the specification and claims are now in proper form, and that the claims all define patentably over the prior art. Therefore applicant submits that this application is now in condition for allowance and which action is respectfully solicited.

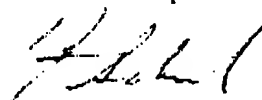
#### CONDITIONAL REQUEST FOR CONSTRUCTIVE ASSISTANCE

Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully

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requests the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. 2173.02 and 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,

  
Ferdinand Schermel  
Applicant Pro Se

RR#10  
Brampton, Ontario  
Canada  
L6V 3N2  
phone 905 451 1513 fax 905 451 8125

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Claims: 1 claim:

1 ( *currently amended* ) A modular wheeled container system that is tilted from the free standing position for rolling consisting of open top containers that can nest within each other comprising:

a) a wheeled container having a means for rolling, a top interface, a means for securing across the said top interface

b) a first attachable container which rests on top of said wheeled container, having a bottom and top interface and a means for securing across it's top interface

c) an optional second attachable container having a bottom interface which rests on top of first said attachable container, to be added if the combined height of the said wheeled container and said first attachable container do not reach the height necessary for ergonomically comfortable tilting and rolling,

d) a means for securing and lifting with two hands

wherein said means for securing of said wheeled container secures between or across the adjoining interfaces of said top interface of said wheeled container to said bottom interface of said first attachable container wherein a two container single rigid entity is formed from the secured said wheeled container and said first attachable container wherein the said first attachable container becomes the vertical structural extension to allow ergonomically comfortable tilting and rolling of the said two container single rigid entity, and wherein a cart, frame, or vertically extending handle is no longer required, and wherein the tilting shifts the center of gravity of the load vertically above the axis of the said means for rolling and wherein the angle of tilt is greater than 10 degrees between the free standing

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- 22 position and tilted position, and whereby the vertical stability is increased without increasing either the effective lifting weight or adding horizontal protrusion to a wheeled container to widen the base to increase the vertical stability, and wherein and whereby the sum of the volumetric capacity of the said first attachable container and the said wheeled
- 26 container is greater than 25 gallons and wherein the a base perimeter of the wheeled container is greater than 55 inches and wherein the total volume of the said two container rigid entity is greater than 32 gallons, and wherein the said wheeled container can nest within the said first attachable container,
- 30 and if said second attachable container is used needed to reach the height necessary for ergonomically comfortable tilting and rolling, wherein said means for securing of the first attachable container secures between or across the adjoining interfaces of said top interface of said first attachable container to said bottom interface of said second attachable container and wherein a three container single rigid entity is formed from the secured said wheeled container secured to said first attachable container, and said second attachable container secured to said first attachable container wherein said first attachable container and second attachable container become the vertical structural extension to allow ergonomically comfortable tilting and rolling of the said three container single rigid entity, and wherein a cart, frame, or vertically extending handle is no longer required, and
- 40 wherein the tilting shifts the center of gravity of the load vertically above the axis of the said means for rolling and wherein the angle of tilt is greater than 10 degrees between the free standing position and tilted position, and whereby the vertical stability is increased without increasing the effective lifting weight or adding horizontal protrusion to a wheeled

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44 container to widen the base to increase the vertical stability, and wherein ~~and whereby~~ the sum of the volumetric capacity of the said first attachable container and the said wheeled container is greater than 25 gallons, and wherein the base perimeter of the wheeled container is greater than 55 inches and wherein the total volume of the said two container rigid entity is greater than 32 gallons, and wherein the said wheeled container can nest within the said first attachable container and said first attachable container can nest within the said second attachable container.

9 2 (canceled)

3. (previously amended ) The system of claim 1 further including a means for hitching said two container single rigid entity or said three container single rigid entity to a second said two container single rigid entity or second said three container single rigid entity, for rolling in the tilted position wherein the said means for hitching fastens the said two container single rigid entity or said three container single rigid entity to a second said two container single rigid entity or second said three container single rigid entity, and wherein the tilting shifts the center of gravity of the load vertically above the axis of the said means for rolling and wherein the angle of tilt between the vertical axis of the said two container single rigid entity or said three container single rigid entity to a second said two container single rigid entity or second said three container single rigid entity is greater than 10 degrees between its free standing position and tilted position and whereby the said two container single rigid entity or said three container single rigid entity fastened to a second

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said two container single rigid entity or second said three container single rigid entity is vertically stabilized in the tilted position and whereby castored wheels are no longer required,

4 *(previously amended)* The system of claim 3 wherein said two container single rigid entity or said three container single rigid entity and / or second said two container single rigid entity or said three container single rigid entity is a refuse container,

5. *(currently amended)* The system of claim 4 wherein first said ~~first~~ attachable container is a recycle container on top of said refuse container.

6. *(currently amended)* The system of claim 5 wherein said means for securing said wheeled container or said refuse container to first said attachable container or first said ~~first~~ attachable container to second said second attachable container is a handle, telescope fit, groove, over center clasp, or latch.

7. *(Not entered)*

8. *(canceled)*

9. *(Previously amended)* The system of Claim 3 wherein the said means for hitching remains fastened when moved from the tilted position to the free standing position.

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10. *(Previously amended)* The system of claim 3 wherein said rigid entity is a luggage device or general purpose cart.

11.-16. *(canceled)*

17. *(Not entered)*

18.-20 *(canceled)*

21. *(Not entered)*

22. *(previously amended)* The system of claim 4 wherein there is a plurality of hitched said two container single rigid entity or said three container single rigid entity or plurality of said refuse container or combination thereof.

23. *(canceled)*

24. *(new)* The system of claim 6 wherein said refuse container includes;  
a receptacle body having vertical side walls and a central cavity extending downwardly there between;  
a lid having a downturned peripheral rim receivable over a top end of said receptacle body, said lid having peripherally located detent means;  
at least two lid locking handle having an inward end pivotally coupled to said receptacle body side walls and an outward free end; said handle having camming handle locking projection means and lid locking projection means for respective engagement against said



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receptacle body side walls and said lid detent means as said handle free end is pivoted toward said receptacle body,

and wherein a portion of said handle free end extends above a top surface of said lid,

and wherein said handle locking projection means comprising at least one eccentric camming lobe disposed to rotate over said receptacle body side walls into a fixed, locked position,

and wherein said receptacle body is formed of elastomeric plastics material deformable inwardly under influence of said camming lobe,

and wherein said camming lobe residing in a vertically extending recess formed within said receptacle body,

and wherein said lid locking projection means comprising a tooth extension projecting parallel and spaced apart from said camming lobe,

and wherein said lid detent means being located in said lid peripheral rim,

and wherein said lid detent means comprising a continuous groove in said lid peripheral rim adapted to receive said handle tooth extension therein,

and wherein said lid and said receptacle body being of circular horizontal cross section whereby said lid is situatable upon said receptacle body throughout a 360 degree range of orientation,

and wherein said lid locking handle having a generally U-shaped profile, comprising parallel arm segments extending from a central bight portion, with remote ends of said arm segments being pivotally coupled to said receptacle body,

and wherein said handle locking projection means comprising at least one eccentric

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camming lobe disposed at a distal end of said handle and adapted to rotate over said receptacle body into a fixed locked position,  
and wherein said receptacle body being composed of resilient elastomeric plastics material deformable inwardly under influence of said camming lobe whereby said receptacle body exerting a residual outwardly directed frictional lock against said camming lobe in said fixed locked position,

improvements comprising;

said attachable container is a recycle container to be secured on top of said refuse container instead of said lid wherein

said recycle container which rests on the said refuse container including:

said recycle container having a downturned peripheral rim receivable over a top end of said receptacle body, said recycle container having peripherally located detent means; at least two said lid locking handle, to be used to lock said recycle container instead of said lid, having an inward end pivotally coupled to said receptacle body side walls and an outward free end; said handle having camming handle locking projection means and recycle container locking projection means for respective engagement against said receptacle body side walls and said recycle container detent means as said handle free end is pivoted toward said receptacle body,  
and wherein a portion of said handle free end extends above said recycle container detent means,

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and wherein said handle locking projection means comprising at least one eccentric camming lobe disposed to rotate over said receptacle body side walls into a fixed, locked position,

improvements further comprising wherein said handle is said means for securing said recycle container to said refuse container whereby the volume of the container is increased without increasing the effective lifting weight and whereby the vertical extension of the said recycle container creates a second gripping position of significant distance above the said handle to allow a two handed vertical stabilizing force while rolling,

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improvements further comprising wherein said handle is said means for securing said first attachable container to said wheeled container, and second said attachable container to first said attachable container, and third said attachable container to second said attachable container,

improvements further comprising wherein the said refuse container or said wheeled container has a base perimeter greater than 55 inches and vertical height reduced for an equivalent 32 gallon volume wherein the vertical stability is increased and wherein the first said attachable container, and second said attachable container if needed, becomes the vertical structural extension to allow ergonomically comfortable tilting and rolling and wherein a cart, frame or vertically extending handle is no longer required,

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improvements further comprising wherein said handle of first said rigid entity and said handle of second said rigid entity and further said hitch are connected together to form said means for hitching whereby hitched said rigid entities or said refuse containers or combination thereof can be tilted for rolling, and remain hitched when tilted from free standing position and tilted for rolling position.

25 (New) The said attachable container of claim 24 further including two or more said handle and said attachable container having a receptacle body having vertical side walls and a central cavity extending downwardly there between,

said attachable container having an outward peripheral rim receivable with top end of said receptacle body, said attachable container having peripherally located detent means; at least two attachable container locking handle having an inward end pivotally coupled to said receptacle body side walls and an outward free end; said handle having camming handle locking projection means and attachable container locking projection means for respective engagement against said receptacle body side walls and said attachable container detent means as said handle free end is pivoted toward said receptacle body,

26.(New) The said attachable container of claim 25 further including:

wherein said handle locking projection means comprising at least one eccentric camming lobe disposed to rotate over said receptacle body side walls into a fixed, locked position,

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and wherein said receptacle body is formed of elastomeric plastics material deformable inwardly under influence of said camming lobe,

and wherein said attachable container locking projection means comprising a tooth extension projecting parallel and spaced apart from said camming lobe,

and wherein said attachable container detent means being located in said attachable container peripheral rim,

and wherein said attachable container detent means comprising a continuous groove in said attachable container peripheral rim adapted to receive said handle tooth extension therein,

and wherein said attachable container locking handle having a generally U-shaped profile, comprising parallel arm segments extending from a central bight portion, with remote ends of said arm segments being pivotally coupled to said receptacle body,

and wherein said handle locking projection means comprising at least one eccentric camming lobe disposed at a distal end of said handle and adapted to rotate over said receptacle body into a fixed locked position,

and wherein said receptacle body being composed of resilient elastomeric plastics material deformable inwardly under influence of said camming lobe whereby said receptacle body exerting a residual outwardly directed frictional lock against said camming lobe in said fixed locked position.

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Applicant proposes that the following amendment to the Operation under DEFINITION OF TERMS

**RUBBERMAID refuse container-** 'RUBBERMAID' refuse container refers to the 32 wheeled refuse container that is tilted for rolling having the Ferbrache handles for lifting and lid fastening as show in Fig 8, 9, 10 and identification/ description in the specification and claims will be defined by the term 'RUBBERMAID refuse container' and since many of the claims refer to this specific container and handles, it is imperative to use this term. The term 'RUBBERMAID refuse container' in this patent in the disclosure and claims will include all of the following limitations and descriptions as described in the US 4,691,840 FERBRACHE patent and will clarify the claims in terms the relationship of the independent and dependent claims even though the numbers of the claims have been removed to avoid confusion with applicants claims:

A refuse container comprising:

a receptacle body having vertical side walls and a central cavity extending downwardly there between;

a lid having a downturned peripheral rim receivable over a top end of said receptacle body, said lid having peripherally located detent means;

at least one lid locking handle having an inward end pivotally coupled to said receptacle body side walls and an outward free end; said handle having camming handle locking projection means and lid locking projection means for respective engagement against said receptacle body side walls and said lid detent means as said handle free end is pivoted toward said receptacle body.

2. A refuse container according to claim 1, wherein a portion of said handle free end extends above a top surface of said lid.

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3. A refuse container according to claim 1, wherein said handle locking projection means comprising at least one eccentric camming lobe disposed to rotate over said receptacle body side walls into a fixed, locked position.
4. A refuse container according to claim 3, wherein said receptacle body is formed of elastomeric plastics material deformable inwardly under influence of said camming lobe.
5. A refuse container according to claim 4, wherein said camming lobe residing in a vertically extending recess formed within said receptacle body.
6. A refuse container according to claim 5, wherein said lid locking projection means comprising a tooth extension projecting parallel and spaced apart from said camming lobe.
7. A refuse container according to claim 6, wherein said lid detent means being located in said lid peripheral rim.
8. A refuse container according to claim 7, wherein said lid detent means comprising a continuous groove in said lid peripheral rim adapted to receive said handle tooth extension therein.
9. A refuse container according to claim 8, wherein said lid and said receptacle body being of circular horizontal cross section whereby said lid is situatable upon said receptacle body throughout a 360 degree range of orientation.
10. A refuse container according to claim 1, wherein said lid locking handle having a generally U-shaped profile, comprising parallel arm segments extending from a central bight portion, with remote ends of said arm segments being pivotally coupled to said receptacle body.
11. A refuse container according to claim 10, wherein said handle locking projection means comprising at least one eccentric camming lobe disposed at a distal end of said handle and adapted to rotate over said receptacle body into a fixed locked position.
12. A refuse container according to claim 11, wherein said receptacle body being composed of resilient elastomeric plastics material deformable inwardly under influence of said camming lobe whereby said receptacle body exerting a residual outwardly directed frictional lock against said camming lobe in said fixed locked position.
13. A refuse container comprising:  
  
a receptacle body having vertical side walls and a central cavity extending downwardly therebetween;  
  
a lid having a downturned peripheral lid receivable over said top end of said receptacle body and said lid having peripherally located detent means;

at least one generally U-shaped handle comprising two parallel arm segments extending from a central bight portion, with distal ends of said handle arm segments pivotally coupled to said receptacle body, whereby said bight portion swinging toward said receptacle body into a locking position and away from said receptacle body into a release position; at least one said handle arm segment having spaced apart handle locking means and lid locking projection means to respectively engage said receptacle side walls and said lid detent means as said handle bight portion is pivoted toward said receptacle body

14. A refuse container according to claim 13, wherein said handle bight portion extending above the top surface of said lid in said locking position.

15. A refuse container according to claim 14, wherein said lid and said receptacle body being of substantially circular in horizontal cross section.

16. A refuse container according to claim 15, wherein said lid detent means comprising a continuous groove formed in said lid peripheral rim.

17. A refuse container according to claim 16, wherein said lid locking projection means comprising a tooth projection profiled for receipt into said lid rim groove.

18. A refuse container according to claim 13, wherein said handle locking means comprising an eccentric camming lobe disposed to rotate over said receptacle as said handle bight portion is rotated into said locking position.

19. A refuse container according to claim 18, wherein said receptacle body being composed of resilient plastic materials deformable inwardly as said camming lobe rotates thereover, whereby said receptacle body exerting outwardly directed resilient forces against said camming lobe in said locked position.

20. A refuse container, according to claim 19, wherein said camming lobe residing in a vertical track recess formed in said receptacle body.



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Patent Application of  
Ferdinand Schermel  
for

Title: **TILTABLE MODULAR RECYCLE CONTAINER SYSTEM**

#### **CROSS REFERENCE TO RELATED APPLICATIONS**

<u>US 60/209,964</u>	<u>SCHERMEL</u>	<u>JUNE 00</u>
US 5,683,030	MOORE	APR 95
US 5,445,397	EVANS	MAY 94
US 5,192,092	DIBENEDETTO	MAR 91
US 4,834,253	CRINE	APR 88
US 4,821,903	HAYES	APR 88
US 4,691,840	FERBRACHE	SEPT 87

#### **BACKGROUND- FIELD OF INVENTION**

This invention relates to tiltable wheeled containers used for refuse and recycling storage, hitching and movement.

#### **BACKGROUND --DESCRIPTION OF PRIOR ART**

Recycling bins have been used to store and move materials for over 40 years. The methods used are different for commercial and residential. Recycling was introduced long after refuse collection had been in place and has been treated as an independent operation. At first recyclable materials were piled separately, then bundled, then placed in a container, then more sophisticated containers were developed having multiple or divided containment areas. The problem with multiple bin units was that the contents had to be emptied into different larger containers making this a difficult task that required lifting all the contents and blocking the contents that were not to be dumped into the larger container. Residential recycle bin designs have been constrained by cost and lifting weight. The higher demand for separation of different recyclables has resulted in the need for two or more bins. Simple bins have been made stackable to reduce space and carts have been made to move the bins to the curb.